

**AMENDED CLAIMS**

[Received by the International Bureau on 31 August 2005 (31.08.2005):  
original claim 1 is amended ; original claims 2-5 are unchanged ; new claims 6 and 7 are added.]

1. (Amended) An evacuation apparatus comprising:  
a first vacuum pump connected to a vacuum chamber; and  
5 a second vacuum pump connected to said first vacuum pump;  
wherein said first vacuum pump has a pair of multistage  
pump rotors; and  
wherein said first vacuum serves as a booster pump for  
increasing a pumping speed of said second vacuum pump serving  
10 as a main pump.
2. An evacuation apparatus according to claim 1, wherein  
each of said multistage pump rotors has an inlet-side rotor  
and an outlet-side rotor, and an axial width of said inlet-side  
15 rotor is larger than an axial width of said outlet-side rotor.
3. An evacuation apparatus according to claim 1 or 2,  
wherein said first vacuum pump is started after said second  
vacuum pump is started.  
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4. An evacuation apparatus according to any one of claims  
1 to 3, wherein a rotational speed of said multistage pump  
rotors is controlled based on a temperature of a gas delivered  
by said evacuation apparatus, a pressure of the gas, a  
25 temperature of a rotor casing for housing said multistage  
pump rotors, or electric current flowing into a motor for  
rotating said multistage pump rotors.
5. An evacuating apparatus according to any one of claims  
30 1 to 4, wherein said first vacuum pump and said second vacuum  
pump are accommodated in a single enclosure.

6. (Added) An evacuation apparatus according to claim 1, wherein said second vacuum pump comprises a brushless DC motor.

- 5           7. (Added) A method of operating an evacuation apparatus having a booster pump connected to a vacuum chamber and a main pump connected to the booster pump, the booster pump having a pair of multistage pump rotors, said method comprising:
- 10           starting the main pump;  
            operating the main pump at a rated rotational speed;  
            starting the booster pump after a predetermined period of time has passed from said starting the main pump;  
            operating the booster pump at a constant rotational  
15 speed; and  
            when a pressure of a gas in the vacuum chamber is lowered to a predetermined pressure, increasing the rotational speed of the booster pump.